

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference SK280WO	<b>FOR FURTHER ACTION</b>	See item 4 below
International application No. PCT/JP2004/008325	International filing date ( <i>day/month/year</i> ) 14 June 2004 (14.06.2004)	Priority date ( <i>day/month/year</i> ) 13 June 2003 (13.06.2003)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant Sekisui Chemical Co., Ltd.		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- |                                     |              |   |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the report   |
| <input type="checkbox"/>            | Box No. II   | Priority  |
| <input checked="" type="checkbox"/> | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input checked="" type="checkbox"/> | Box No. IV   | Lack of unity of invention  |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited   |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application  |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application   |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No. +41 22 740 14 35	Date of issuance of this report 24 April 2006 (24.04.2006)  Authorized officer  <div style="text-align: center; font-weight: bold; font-size: 1.2em;">Yoshiko Kuwahara</div>  Telephone No. +41 22 338 90 90
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# PATENT COOPERATION TREATY

TRANSLATION

From the  
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing  
(day/month/year)

Applicant's or agent's file reference  
**SK280WO**

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No. <b>PCT/JP2004/008325</b>	International filing date (day/month/year) <b>14.06.2004</b>	Priority date (day/month/year) <b>13.06.2003</b>
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International Patent Classification (IPC) or both national classification and IPC

Applicant  
**Sekisui Chemical Co., Ltd.**

1. This opinion contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the opinion
<input type="checkbox"/>	Box No. II	Priority
<input checked="" type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input checked="" type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/IP	Authorized officer
Facsimile No.	Telephone No.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/008325

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐

This opinion has been established on the basis of a translation from the original language into the following language

\_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under

Rule 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐

a sequence listing

☐

table(s) related to the sequence listing

b. format of material

☐

in written format

☐

in computer readable form

c. time of filing/furnishing

☐

contained in the international application as filed.

☐

filed together with the international application in computer readable form.

☐

furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/008325

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application

☒ claims Nos. 7-14

because:

☐ the said international application, or the said claims Nos. \_\_\_\_\_  
relate to the following subject matter which does not require an international preliminary examination (*specify*):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. \_\_\_\_\_  
are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. \_\_\_\_\_ are so inadequately supported  
by the description that no meaningful opinion could be formed.

☒ no international search report has been established for said claims Nos. 7-14

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐ has not been furnished

☐ does not comply with the standard

the computer readable form

☐ has not been furnished

☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.

☐ See Supplemental Box for further details.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/008325

Box No. IV Lack of unity of invention

1. ☐ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has:
- ☐ paid additional fees
- ☐ paid additional fees under protest
- ☒ not paid additional fees
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is
- ☐ complied with
- ☒ not complied with for the following reasons:

Technical feature of claim 1 (and claims dependent thereon) is that "the spacer particles in the spacer particles-dispersed liquid have been subjected to charging processing and the black matrix of the substrate is entirely or partially charged with an opposite charge relatively to the spacer particles".

Technical feature of claim 7 (and claims dependent thereon) is that "a backward contact angle to the substrate to which the spacer particles-dispersed liquid in the spacer particles-dispersed liquid is discharged is 5 degree or more".

Technical feature of claim 10 (and claims dependent thereon) is that "droplets of the spacer particles-dispersed liquid is spotted to a position which has a low-energy surface formed in the black matrix in at least one substrate or an area corresponding to the black matrix, and the droplets of the spacer particles-dispersed liquid is dried to hold the spacer particles in the black matrix or the area corresponding to the black matrix".

Technical feature of claim 13 (and claims dependent thereon) is that "the droplets of the spacer particles-dispersed liquid is spotted so as to include an uneven part formed in the area corresponding to the black matrix of at least one substrate, and dried to hold the spacer particles in the area corresponding to the black matrix".

As above, the inventions of claim 1 (and claims dependent thereon), claim 7 (and claims dependent thereon), claim 10 (and claims dependent thereon), and claim 13 (and claims dependent thereon) respectively have different technical features.

That means, claims 1-14 respectively describe 4 types of inventions having different technical features, and claims 1-14 do not have common technical features to all of them.

Consequently, claims 1-14 do not meet requirements of unity of invention.

4. Consequently, this opinion has been established in respect of the following parts of the international application:
- ☐ all parts
- ☒ the parts relating to claims Nos. 1-6

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/008325

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1-6	YES
	Claims	NO
Inventive step (IS)	Claims 1-6	YES
	Claims	NO
Industrial applicability (IA)	Claims 1-6	YES
	Claims	NO

2. Citations and explanations:

Document 1: JP, 11-24083, A (Asahi Glass Co., Ltd), 29 January, 1999 (29.01.99), full text, all drawings (Family: none)

Document 2: JP, 9-105946, A (Toshiba Corp.), 22 April, 1997 (22.04.97), full text, all drawings (Family: none)

Document 3: JP, 11-7028, A (Asahi Glass Co., Ltd), 22 January, 1999 (22.01.99), full text, all drawings (Family: none)

Document 4: JP, 2000-235188, A (Hitachi, Ltd.), 29 August, 2000 (29.08.00), full text, all drawings (Family: none)

Document 5: JP, 2001-188235, A (Seiko Epson Corp.), 10 July, 2001 (10.07.01), full text, all drawings (Family: none)

The subject matters of claims 1-6 are not described in the documents 1-5 cited in the ISR nor obvious to a person skilled in the art.